Responsible Office: Safety and Mission Assurance Office

SUBJECT: Program/Product Assurance

1. ~~SUMMARY~~POLICY

This directive sets forth policy, responsibilities, and authority for the Langley Research Center (LaRC) Program Assurance (PA) functions which include: systems safety; quality assurance; systems reliability; parts, materials, and processes; software assurance, and ~~configuration control~~risk management. This Center will plan and execute its activities to utilize practical and cost-effective measures to accomplish necessary high levels of PA commensurate with the research, aeronautics and space objectives.

2. ~~POLICY~~APPLICABILITY

This LaRC directive is applicable to all Government, contractor, or other organization employees at LaRC, in accordance with the terms expressed in their respective agreements, joint operating procedures, or contracts with LaRC. ~~This Center will plan and execute its activities to utilize practical and cost-effective measures to accomplish necessary high levels of program assurancePA commensurate with the research, aeronautics and space objectives.~~

3. AUTHORITY

~~a.~~ NPD 8700.1, "NASA Policy for Safety and Mission Success."

4. ~~REFERENCES~~APPLICABLE DOCUMENTS

a. NPD 2820.1, "NASA Software Policy."

b. NPR 8735.2, "Management of Government Safety and Mission Assurance Surveillance Functions for NASA Contracts."

c. LPR 1710.15, "Wind-Tunnel Model Systems Criteria."

d. LPR 1710.16, "Aviation Operations and Safety Manual."

e. LPR 1740.4, "Facility System Safety Analysis and Configuration Management."

f. LPR 5300.1, "Space Product Assurance."

g. LMS-CP-5580, "Airworthiness and Safety Review Board (ASRB)."

5. RESPONSIBILITIESY

a. General

(1) The single point of responsibility and authority for PA activities within this Center rests with the Safety and Mission Assurance Office (SMAO).

(2) LPR 5300.1, “Space Product Assurance,” describes the PA practices which are necessary to accomplish this Center’s Spaceflight Projects and Systems and is to be the basis for the development of product assurance plans. Appropriate sections can be selectively applied in consultation with Mission Assurance Branch for the effective execution of specific projects in a manner consistent with the above policy.

(3) Safety and Mission Assurance practices apply for all Exploration projects and a wide range of other projects. Traditional space flight projects which require Safety and Mission Assurance (S&MA) support include atmospheric science instruments and missions, Shuttle and International Space Station payloads and experiments, and planetary science payloads and missions. S&MA requirements must be met on human space flight projects and also on risk reduction flights, flight experiments, flights of opportunity that are sub-orbital, involve sounding rockets, un-crewed aerospace vehicles, drop models and major Unmanned Aerial Vehicle (UAV) operations. Projects and/or experiments which are Technology Readiness Level (TRL) 6 or higher are subject to S&MA review and requirements.

(4) Wind tunnel models safety assurance requirements are specified in LPR 1710.15, “Wind Tunnel Model Systems Criteria.” Flight experiments in aircraft are additionally required to follow LPR 1710.16, “Aviation Operations and Safety Manual” and LMS-CP-5580, “Airworthiness and Safety Review Board (ASRB).”

b. Director, SMAO

(1) Provide guidance and direction for Center-wide PA activities.

(2) Ensure that the actions taken are in accordance with NASA and LaRC policies and are properly coordinated.

(3) Evaluate and report on the effectiveness of PA activities; make recommendations for improvements in these activities; and follow up on these recommendations.

(4) Serve as the Center’s focal point for inquiries from business firms, industry associations, Government agencies, and universities concerning PA matters.

c. Line Managers

Ensure proper application of PA requirements to activities under their supervision.

d. Project Managers

(1) Develop product assurance plans in concert with the Safety and Facility Mission Assurance Branch, SMAO. Implement product assurance plans consistent with project objectives.

(2) Coordinate PA activities with SMAO.

(3) Ensure compliance with Center-wide policies and practices.

e. Mission Assurance Branch, SMAO

(1) Plan, direct, and execute a comprehensive program to provide the PA required for this Center's programs.

(2) Define and implement Center-wide aeronautics and space PA policy and procedures.

(3) Plan, direct, and coordinate the application of PA methodology and analytical techniques.

(4) Represent the Center on PA matters at conferences, symposia, and meetings sponsored by industry, Government, universities, and professional and technical societies.

(5) Prepare and implement product assurance plans; system reliability analysis; internal and external audits, surveys, and assessments.

(6) Provide assurance personnel for Center-related committees, panels, boards, surveys, and teams.

f. Safety and Facility Assurance Branch, SMAO

(1) Define and implement facility PA policy and procedures.

(2) Implement facility systems safety analysis and configuration management requirements for LaRC research facilities.

g. Research, Projects and Engineering Organizations

Perform responsibilities in accordance with product assurance plans, and PA policies and directives.

6. DELEGATION OF AUTHORITY

None.

7. MEASUREMENTS

The Safety and Mission Assurance Annual Operating Agreement contains metrics that pertain to compliance with this policy directive and LPR 5300.1, “Space Product Assurance.”

8. CANCELLATION

LAPD 5300.1, dated October 6, 2004.

Lesa B. Roe
Director